IX. *A Letter from* Robert Southwell, *Eſq; to Mr.* Henry Oldenburg, *concerning ſome extraordinary* Ecchoes, *lately communicated to the* Royal Society *by the Reverend* Henry Miles, *D. D. & F. R. S.*

Read June 5. 1746.

I MUST needs account myſelf very happy, in that I partake ſo conſtant and freſh Intelligence of the Matters of the World; and that from ſo active a Hand, as that I know no Example of greater Exactneſs and Induſtry any where than what is with you.

I am very much rejoiced at the happy Advancement of Learning in the *Royal Society*; and that the radiant Influence of His Majeſty is like to ſmile upon it. And as to your Query concerning Sounds and Ecchoes, I do remember, that the Duke of *Tuſcany* * has made rare Trials concerning the Velocity in the Motion of Sound; and I gave Mr. *Boyle*, in almoſt a Sheet of Paper, an Account and a Diſcourſe upon thoſe Experiments, and the Manner of them.

As for whiſpering Places, the beſt I ever ſaw was that at *Glouceſter:* But in *Italy*, in the Way to *Naples*, two Days from *Rome*, I ſaw, in an Inn, a Room with a ſquare Vault, where whiſpering, you could eaſily hear it at the oppoſite Corner, but not in the leaſt manner at the ſide Corner that was nearer to you.

I ſaw another, in the Way from *Paris* to *Lyons*, in the Porch of a common Inn, which had a round Vault; but neither of theſe were comparable to that of

* See the Exp. of the Academy del *Cimento*.

of *Glouceſter*; only the Difference between theſe two laſt was, that to this, holding your Mouth to the Side of the Wall, ſeveral could hear you on the other Side; the Voice being more diffuſed. But, to the former, it being a ſquare Room, and you whiſpering in the Corner, it was only audible in the oppoſite Corner; and not to any Diſtance from thence, as to Diſtinction of the Words. And this Virtue was common to each Corner of the Room, and not confined to one.

As to Ecchoes, there is one at *Bruxelles* that anſwers fifteen times: But when I was at *Milan*, I took a Coach to go two Miles from thence to a Nobleman's Palace, now not in great Repair, and only a Peaſant or Contadine living in one End of it. The Building is of ſome Length in the Front, and has two Wings jetting forward; ſo that it wants only one Side of an oblong Figure. About an hundred Paces before the Houſe, there runs a ſmall Brook, and that very ſlowly; over which you paſs from the Houſe into the Garden. We carried ſome Piſtols with us; and, firing one of them, I heard 56 Reiterations of the Noiſe. The firſt twenty were with ſome Diſtinction; but then, as the Noiſe ſeemed to fly away, and anſwer at a great Diſtance, the Repetition was ſo doubled, as that you could hardly count them all; ſeeming as if the principal Sound was ſaluted in its Paſſage by Reports on this and that Side at the ſame time.

There were of our Company that reckoned above 60 Reiterations when a louder Piſtol went off; and indeed it was a very grateful Divertiſement. But on the other Side the Houſe, on the oppoſite Wing, it would

it would not ſound; and only (to this Advantage) in a certain Chamber here two Stories high from the Ground.

I continue as yet at *Kinſaile*; but ſhall ſhortly return to *Dublin*, where I ſhall hope to inlarge the Fraternity; but theſe Parts are moſt inſipid, and void of Curioſity. I am,

Deareſt Sir,

Your moſt affectionate Friend and Servant,

Kinſaile, Sept. 19. 1661.

Robert Southwell.

X. *A Letter from Mr.* J. Durant *to the Honourable* Robert Boyle, *Eſq*; *F. R. S. concerning a* Coal-Mine *taking Fire near* Newcaſtle *upon* Tyne; *of the* blue Well; *and of a* ſubterraneous Cavern *in* Weredale; *lately communicated by the ſame Hand.*

SIR,

Read June 5. 1746. THE Honour you were pleaſed to do me ſome Months ago, in the favourable Reception of an impertinent Viſit, emboldens me to apologize for Non-performance of my Promiſe, which you accepted of, for ſending you ſome of our Coal-Marcaſites, and ſubterraneal Sublimates, from the fired Coal-Mines near our Town; the Weather having been ſuch, by Storms of Snow, violent Rains and Thaws, and keen Froſts, as it was not poſſible to gather the Evomitions of our *Vulcano's*;